THE GENESEE FARMER.

Agriculture is the most Healthy and Honorable, as it is the most Natural and Useful pursuit of Man.

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TO THE FRIENDS AND READERS OF THE FARMER.

Having disposed of the Genesee Farmer to Dr. Daniel Lee, the connection of the undersigned, as Publisher and Associate Editor of the same, ceases with the present number and volume. The occasion which renders this announcement necessary, will permit a brief review of personal efforts, without subjecting the writer to the charge of possessing an undue share of egotism.

For the past four years my time and energies have been exclusively devoted to this Journal and the interests it has sought to promote. Aside from personal considerations, my heart has been ardently engaged in the Cause of Rural Improvement and Progress—and for its advancement I have hopefully and cheerfully labored. However humble the instrument, or feeble the capacity, the objects in view were most worthy, and the efforts put forth have been earnest and unceasing. When the Farmer passed into my hands, few, even of its best friends, believed that it could be resuscitated and established upon a permanent basis—and nearly all considered the enterprise extremely unpropitious. But, confident and enthusiastic, I judged otherwise, and determined to merit and achieve success. To accomplish an object so desirable, personal ease and pleasure were disregarded, and whatever industry and ability I could command brought into requisition. The result proves that my confidence was not misplaced, and that the labor bestowed upon the work by its conductors, has met with commensurate return in the substantial and unexampled support received. And it affords me pleasure to state in this connection, what I trust will prove equally gratifying to its readers, that the Genesee Farmer now has a greater circulation than ever before, even in its palmiest days—and that, consequently, it is entitled to rank as at least equal, in both influence and usefulness, to any of its able and well conducted contemporaries.

The unusual success and popularity of the Farmer, however, have not been acquired by the writer and his able associates, (Messrs. Lee and Barry,) alone. Others are perhaps entitled to equal if not greater credit. As Publisher, particularly, I have been constantly aided by numerous influential persons residing in various sections of the Union. Indeed, they have seconded my efforts, and responded to my requests, in every appropriate manner—in the capacity of Contributors, Agents and Subscribers—and it is to them, rather than to any talent or exertions of my own, that the public are mainly indebted for whatever benefit may have accrued to the agricultural community through the agency of my constant and persevering labors. Unsustained by such friends—men of enterprise, possessing influence in their various localities, and actuated by high and generous motives—the Farmer would never have become so valuable and creditable as it now is, or even been kept in existence. To each and all, therefore, who have in any manner contributed to the success of this Journal—either by communicating the results of their observation, study and experience to its pages, or in augmenting its subscription list—I tender the sincere and grateful acknowledgments of an appreciating heart, not only for kindness extended to myself, but for the exercise of that spirit of liberality and true patriotism which has induced them to award support to a publication designed to promote the most prominent interests of our wide spread Republic.

To the Press, at home and abroad, I am indebted for many friendly notices and favors. This remark applies particularly to the Press of Western and Central New York, to the conductors of which I am under especial obligations for personal kindness and courtesy on all occasions. To all members of the brotherhood, near and distant, cordial thanks are tendered for past favors—with an assurance that the acquaintance which has proved so pleasant to myself will ere long be renewed. May they all use wisely and successfully the power they have to enlighten and instruct the heart and mind—to direct and control public opinion and character. May usefulness guide them continually, and honor and prosperity attend their future efforts and progress.

In reviewing my editorial career I find comparatively little that I should wish to undo. Much, however, has been omitted. The printing and publishing of the Farmer has necessarily occupied a great share of my attention, and (Dr. Lee being absent much of the time, engaged in other important duties,) the editorial department has suffered in consequnce. Indeed, I do not claim to have performed fully and well the duties of an Editor—and have certainly fallen far short of my own standard, and conception of what ought to be accomplished. It has been my constant aim to keep the pages of the Farmer free from error and imposition of any and all kinds, and to render every line reliable and useful to its readers. How well I have succeeded in this honest endeavor each subscriber must judge for himself. But I trust my efforts have not proved worthless to those for

whose benefit I have labored, and that the back volumes of the Farmer are worthy of preservation and valuable for present and future reference. I leave the publisher's desk and editorial chair with the consciousness of having endeavored to perform aright the duties that have devolved upon me—the conviction that I have dealt uprightly, and that the pages of the Farmer have been kept comparatively free from matter offensive to good morals, correct taste, common sense, and practical and judicious husbandry.

Although no longer connected with it my good wishes for the success and usefulness of the GENESEE FARMER, will not, I trust, diminish. My connection with the paper has been pleasant and not unprofitable—and in leaving it I fervently desire the prosperity of my successor. Dr. LEE has recently returned from the South, and will hereafter devote his principal time and attention to this Journal. To those who have perused his able articles and essays, or listened to his eloquent lectures, it is unnecessary for me to speak of his superior abilities. But in order that the agricultural community may receive the full benefit of his services, every reader of the Farmer should lend a portion of influence in its behalf. And I will here ask all the friends of the paper to continue and increase their generous exertions to augment its subscription list, and likewise to be liberal in their contributions to its pages. While I desire that its circulation and consequent power for good may be greatly increased, I hope the paper will continue to be an organ through which sound practical farmers and men of science will impart their experience and wisdom to all reading and thinking cultivators.

In retiring from the Farmer I shall not dissolve my connection with the Agricultural Press, nor abate my efforts for the promotion of Rural Improvement. My labors will be equally earnest, and more frequent—devoted to a *weekly*, instead of a *monthly* periodical. If any desire to continue the acquaintance, I shall be most happy to receive and respond to orders for MOORE'S RURAL NEW-YORKER, for Prospectus of which see advertising department of this number.

It is with emotions of no ordinary character that I take leave of the readers of the Farmer, and add *finis* to my humble but well intentioned labors as connected therewith. To all subscribers and friends I wish success commensurate with their skill and perseverance in enriching both the SOIL and the MIND. That they may reap from the former most abundant harvests, and that the latter may ever abound with the imperishable fruits of knowledge and wisdom, are my fervent aspirations.

D. D. T. MOORE.

THE undersigned has purchased the type, good will, patronage and subscription list of the Genesee Farmer, and will hereafter *publish* as well as *edit* the paper. Although one half of the subscription right has belonged to me since the close of the year 1844, yet it is due to Mr. D. D. T. MOORE that I should say, in parting with him, what is strictly true, that the unparallelled success of the Farmer under his administration is mainly to be ascribed to the ability, fidelity and indomitable perseverance of that gentleman. In whatever enterprise he may embark, I trust he will command, as he will unquestionably deserve, equal, if not greater success.

It is much pleasanter to speak of others than of one's self. But duty calls, and I shall speak plainly what I feel. Born and reared among the farmers of New York, and having ever labored to promote their educational, their agricultural, and other common interests, why should I be compelled, when over forty-five years of age, to go a thousand miles South to earn bread for my family? Before regarding this step as absolutely necessary, I prefer to make one appeal, and *only one*, to the readers of the Genesee Farmer, and wait the result.

There are now some twenty-two millions of people in the United States, more than two-thirds of whom are farmers, or belong to the families of farmers. I deem it as a matter of inestimable moment to our republican system of government, and the good of all classes, that *these millions*, however diffusely scattered and settled soon begin to cultivate a taste for rural literature and science—a love for agricultural reading and books. To promote this object, my feeble pen and feebler tongue have toiled hopefully for years. My son will soon be taught to set up all the type used in printing this cheap Agricultural Journal; and the little savings of a life time will go to pay for a small steam engine and a good power press, which can work off 2,500 sheets of the Farmer in an hour. It will, as hitherto, be sold to clubs, at the pittance of thirty-seven and a half cents a volume, or a year.

Mr. BARRY will continue to conduct the Horticultural Department; and no pains will be spared to render the work a favorite among all who wish well to the cause it advocates. It will be handsomely illustrated with new and elegant engravings. It is my purpose to *condense* into a small space much information culled from foreign and American journals. In this way, by the liberal expenditure of personal toil, a volume of rare excellence can be produced.

I disclaim all wish to compete with the proprietors of other similar journals; and I urge my friends to disabuse their minds of the too popular error, that a farmer who reads one book or one periodical, devoted to the several arts and sciences which pertain to rural affairs has no occasion to read another book, or another periodical, to make him wise and accomplished in his important profession. While the three millions in the thirty States who read nothing, had better subscribe for the Genesee Farmer, and begin to learn *a little*, those that are more advanced may profitably extend their studies to other and more expensive works. In a nation of farmers so prosperous as this, what is fifty cents a year to any one, whether male or female, who really desires to improve a farm, a garden, or an orchard; or to enlarge the minds of the several members of a family who possess these things? This journal ought to have a circulation of fifty thousand copies, and if it fails to reach that figure, it shall not be my fault.

Kind friends, I rely on you to aid in a work in which I must unavoidably give much labor for little pay. It can only prosper by the gratuitous assistance of all that wish well to the Cause, in which this paper has served as a pioneer for twenty years. I have faith to believe that it is destined to do vastly more good within the next twenty, than it has during the last. My arrangements for correspondents and foreign periodicals are such, together with my personal attention, as must greatly improve the future volumes of the Farmer. Send forward then your long lists of subscribers, and I will see how good a volume I can send you in exchange for your money.

DANIEL LEE.

AGRICULTURAL EDUCATION.

We are happy to say there is every reason to expect that the Legislatures of New York and Massachusetts will each establish an agricultural school at its approaching session. Public sentiment at last, has been brought not only to *tolerate*, but to demand the professional education of young farmers. Those that have labored long and against a mountain of prejudice to achieve this result, may well rejoice at the success of their indomitable efforts. Glorious will be the day when the noble arts of Tillage and of Farm Economy, shall fairly emerge from the *empiricism* of unnumbered ages. Science and Literature have often wandered far, and to little purpose. They are now returning like the prodigal son, tired of feeding on husks, to make an enduring home in the peaceful dwellings of American farmers. The generous soil of this young Republic is destined to produce something better than luxuriant crops of grass and grain, fine sheep, cattle and swine. It will yield a bountiful harvest of *men*, improved to the highest attainable point, in all the knowledge, and in all the virtue most useful to intellectual and moral beings.

We thank our Maker that this production of noble men is likely to be as much esteemed in our lifetime, as are bulls and boars, rams and breeding mares. Of all domesticated wild animals, the genus *homo* is most neglected on many farms. England awards premiums of fifty guineas for rearing well formed calves; while she permits unsightly children to be educated for the poor house and the prision. Of all things pertaining to the well-being of society and government, that of training up children in the way they sould go is most important. We take the liberty to offer a few hints on this subject in connection with what we regard as a good Agricultural Education. To attain this object, boys must be educated on well-cultivated, well-managed farms. This will withdraw them from many temptations, alike adverse to sound morality and injurious to physical health and mental vigor. The chief corner stone of human improvement lies in obedience to the letter and spirit of that simple prayer—"*lead us not into temptation*". Lead children not into temptation; and even adults had better keep as far removed from it as practicable.

A school on a good farm will possess many advantages beside its exemption from all the bad examples and immoral influences of cities and villages. Pupils can be boarded much cheaper on the soil that produces their daily food, (not a little of which may be the fruits of their own skill and industry,) than they can be elsewhere. The fact is not to be disguised, that to impart a large mesure of literary and scientific knowlege to the sons and daughters of a whole community, involves considerable expense, which somebody must pay. Therefore, the writer has long studied to economise in every practical way, the whole art and science of thoroughly educating every child in a State.

Boarding and tuition are the principal items of expense. The cost of tuition can only be justly reduced, by so arranging pupils in large classes that a competent and skilful teacher may instruct many at a time; and of course, at a small fee for each person taught. This implies the existence of large schools and several departments in each—a university in miniature. Western New-York should have a Normal School located on a good farm, with a view to economny in living, and to realise the many incidental advantages connected with the arts of agriculture, horticulture, fruit and arbor-culture. But as this may not be the proper time to urge the founding of such an institution, we will give a brief outline of an Agricultural School which will, in our humble judgement, most benefit the great farming interest of the country.

1. There should be a professorship of Geology in its application to agriculture.

2. One of Analytical Chemistry and Meteorology.

3 One of Botany, Vegetable Physiology and Entomology.

4. One of Veterinary Surgery including the Anatomy and Physiology of domestic animals.

5. One of Practical Horticulture, Fruit and Arbor-culture.

6. One of Practical agriculture and farm economy.

A smaller educational force than the above will be too feeble, and must work at great disadvantage. Instead of diminishing it, we should prefer to add a professorship of mathematics with a view to teach practical surveying, teh plotting and mapping fields, bevelling for drains, &c. A professorship of modern languages would also be useful.

It has been found necessary to divide the labor of theaching the Healing Art among six or seven professors in all the medical schools of the United States. Having been regularly through one of these doctor factories, we speak understandingly when we say that, as much science, learning and study are required to form a thoroughly educated farmer as to make a thoroughly educated physician and surgeon. Now, we do not propose to force the study of any branch of natural science upon the young men who are to follow the profession of agriculture through life. Those that prefer ignorance to knowledge, poverty to competence, need have no fears that *they* will not be permitted to enjoy their tastes and their predilections. All we desire is, that so many as wish to become familiar with the laws of nature, which govern the improvement and deterioration of soils, the improvement and deterioration of cultivated plants and domestic animals, and the improvement and deterioration of *men*, shall have a fair opportunity to gratify so laudable a desire.

There are so many seekers after information of the character named, that no one school can do more than prepare well qualified teachers of the various sciences most intimately connected with agriculture and rural economy, to be employed in the great State of New York. It is a capital mistake to suppose that any graduate of a literary or medical college can teach successfully agricultural geology and chemistry, comparative anatomy and meteorology — not to name the practical part of the farmer's profession. To qualify a person to teach any art or any science, it is indispensable that he shall have studied it long and well, and have experience in its practical details. It is an imposition for one to assume to communicate information on any subject to others, of which he is himself ignorant. A studious person who provides himself with suitable books may master in time almost any science, without the aid of any other instruction. This however, is far from being the easiest way; but it is better than to remain in profound ignorance of useful sciences and valuable arts.

That young men have the capacity to improve themselves, as well as the soil and its vegetable and animal products, it is now too late to deny. Let us then give them the best chance for obtaining useful

knowledge, in our power. This is doing no more than our *duty*. If they neglect, or abuse the opportunities proffered, as some will, the fault will be their's, not that of the community nor of its Legislature. Thousands will enter with zeal and success into the study and practice of this new profession. They will elevate the calling of the American husbandman to an equality with any other, for high mental attainments. This alone will secure to the farmers of the country a fair proportion of seats in Congress and other legislative bodies, as compared with their respective numbers in the State and Union. Friends! it will not do, in this go-ahead, pushing age of the world to stand still in the furrow —"to put your hands to the plow, and look back." "Onward and upward" should be our motto. Not to lose an hour in the winter evenings, already commenced, add a few new books to your agricultural library. If you have not Hitchcock's Geology; Johnston's Agricultural Chemistry; Boussingault's Rural Economy: Allen's Farm Book; nor the Back Volumes of the Genesee Farmer, you can not do better than to purchase these works for yourself and family to read. Every farmer worth $1000 should have professional books worth $50; and every one worth $2000, should have a well selected library worth $100. Remember that knowledge is power, ignorance weakness, and act accordingly. Do not deny your children invaluable opportunities for intellectual culture, in order to save a few dollars for show, or some other use of infinitely less moment than a good education. There is something better than gold, and society will certainly find it out. Every year increases our means for improvement. Every year strengthens the influence of cultivated intellect, and the power of mind over matter. We should be watchful of the signs of the times, and work skilfully while the day lasts.

PATENT OFFICE AGRICULTURAL REPORT.

The senior editor of this paper has consented to take charge of the Agricultural matters in the Patent Office, and prepare a Report to Congress at its approaching session. To favor this undertaking he respectfully solicits information on all topics appropriate for such a document, and particularly in reference to the inland commerce of the country. The movement of agricultural products on lakes, rivers, canals and railways is a subject of interest to all intelligent farmers and business men.

Crude guessing in regard to the quantity of grain and other crops grown in the current year, can possess but little value a few months in advance of the U. S. Census, so soon to be taken. Improvement in the practice, and progress in the science of agriculture are objects of great moment at this particular time. The public mind is now more engaged in the work of improving lands, and educating young men not less thoroughly to be farmers than doctors or lawyers are professionally educated, than at any earlier period. Thousands begin to appreciate the fact that, no limited piece of earth can possibly contain an unlimited quantity of the atoms necessary to form good crops of grain, cotton, tobacco or potatoes. The elements of bread and meat in any given soil or field being quite limited, the waste of these elements, when extended over many millions of acres, becomes a matter of paramount national importance. That the quantity of atoms in every cubic foot of soil or earth which can be transformed into wheat, is uniform or alike in all cases, no observing farmer can for a moment believe. If this were the case, then all soils should be alike productive of this valuable crop.

Different soils of varying fertility, possess equally varying amounts of the available constituents of all cultivated plants. If the supply of raw material for making all crops is really inexhaustible, why should any man ever be at the trouble and expense of hauling manure, or of purchasing lime, ashes, gypsum or guano? The use of fertilizers tells the whole story—that the elements of bread and meat may be used up—wasted—utterly lost to the husbandman and the world. How much has been lost to the country since the beginning of the present century? Who can tell?

Great complaint is made by persons belonging to the American navy of the defective manner in which beef, pork and butter are put up for consumption in tropical climates in this country. The navies of European nations are supplied with these perishable commodities in a condition to keep under the equator much longer and better than similar articles made in the United States. This defect is not creditable to American skill in curing meat, butter and cheese. Nor is the preservation of breadstuffs so generally understood as is desirable.

Information on these and other subjects is sought not only at home, but from foreign nations with whom we have commercial and diplomatic intercourse. The collection and diffusion of useful knowledge in the cheapest possible form, are labors in which many can participate.

Should not the young men of America be reminded of their duty in this connection? Look on the broad surface of the Union, and mark the millions of acres of native forests which have fallen and disappeared at the approach of the woodman and his axe. The continued toil of the farmer has dug from the virgin earth nearly the whole wealth of the country. If no damage had been done to the lands under cultivation, our admiration of the industry, enterprise and success with which they have been plowed, hoed and harvested, would be unmingled with regret. But, unfortunately, many millions of acres of American soil have suffered incalculable, if not irreparable injury. The economical renovation of partially exhausted fields; and the cheap improvement of all farming lands that need it, are objects to which much time and study may be profitably devoted.

A Word to Subscribers and Friends.—The publication of the Genesee Farmer will be continued at the old office, in Talman Block, Buffalo-street; and be printed on the same press as heretofore. To prevent mistakes, all persons wishing to renew their subscription, or do any business with the office, should be careful to address: "Daniel Lee, *Publisher of the Genesee Farmer, Rochester, N. Y.*"

Garlick.—To eradicate Garlick or Wild Onion, Mr. Beckwith writes to the Albany Cultivator to the following effect:—"I have adopted a rotation of summer cropping; say, one year corn, next potatoes, next oats, with clover seed, seeding pretty heavily, and plastering the clover. Let it lie one year—then repeat the same course. I had a field very full which I treated as above mentioned, and at the end of the second year the plant had entirely disappeared."

THE PHILOSOPHY OF TILLAGE.

BY DANIEL LEE, M. D.

[*Continued from November number, page* 254.]

Having shown the tendency of the organic elements of crops to escape into the atmosphere by tillage, let us now see in what way they are lost by leaching, in connection with the inorganic elements of plants. This done, we shall be prepared to consider the best ways and means to prevent loss in either direction. The end aimed at is, to accumulate good bread and meat in the soil, like gold in the mint ready to be coined, a little faster than children multiply and come from Europe, to be fed.

The most abundant mineral in the earth is flint or silica, which forms sand and will melt into glass if pure,—an operation that is promoted by the combination of potash, soda or lime. Silica constitutes an important element in the stems of all cereals like wheat, rye, oats, corn, &c. Pure silicious sand is remarkable for its insolubility. It is in truth an acid formed by the union of 52 parts of oxygen with 48 of an earthy base called silicon. This acid combines chemically with alumina; which is the next most abudant mineral in nature, being the basis of clay. Silicic acid also unites with iron, lime, potash, soda and magnesia. Having a weak affinity for these alkalies, and alkaline earth, carbonic acid in water from decaying mould, vegetables or manure, attacks the insoluble silicates of potash and soda, and forms carbonates of those alkalies. These, like pearlash, are very soluble; and what is particularly worthy of note, they are capable of dissolving silica. Thus if we boil finely powdered glass, which is an insoluble silicate, a strong solution of potash, or of potash and soda, the glass will be dissolved, and may be applied to the roots of corn or wheat in a way to enter their roots and go to make the hard glassy covering on the stems of those plants. It is curious that these soluable silicates which contain an excess of the alkali should be changed into insoluble silicates of potash or soda in nature's laboratory within plants, by separating potash or soda from the silica deposited in the cuticle. The potash so liberated returns to the soil and there dissolves more of the flint needed to impart strength to the stem of the plant; precisely as bones enable animals to stand up on the earth.

It is worthy of remark in this connection, that many soils which abound in sand, as in parts of Maryland, Virginia, North and South Carolina and Georgia, lack even the insoluble silicates of potash, soda, magnesia and lime, to a degree. To such soils, it is desirable to apply not only ashes, leached or unleached, but forest leaves and such vegetable substances as abound in potash, as well as the other earthy food of cultivated plants. Thus 100 lbs. of corn cobs will, as they rot, yield more potash to a soil than a like weight of buckwheat straw. Indeed, the component parts of all fertilizers, and of all crops, should be generally understood by husbandmen. A vast amount of labor is wasted in gathering poor or defective fertilizers, where good ones might be obtained at a much cheaper rate. I have briefly alluded to nitrogen, sulphur, phosphorus and chlorine as volatile constituents of vegetable and animal substances, which combined with hydrogen at the time organic bodies decay, rise into the atmosphere. They deserve a short notice as fixed mineral acids in rocks and earths.

When forty parts by weight of oxygen combine chemically with fourteen of nitrogen, fifty-four parts of *aqua fortis* (nitric acid) are produced. This acid combined with potash makes salt petre, or nitrate of potash. This salt, as well as nitrate of soda, are involatile; and both are found in considerable quantities in hot climates, where vgetetation grows luxuriantly, and rots as rapidly. It is believed by chemists that electricity in thunder-clouds often serves to combine the oxygen and nitrogen of the air in proportions to form nitric acid, which falls to the earth in rains. Compounds of this acid are quite soluble, and in all well drained soils, nitre and all nitrates are prone to be washed away.

Twenty-four parts of oxygen combine chemically with sixteen of sulphur, and make forty of sulphuric acid, or oil of vitriol. Unlike nitric acid, this exists in granitic and other rocks, as well as the common loose earths. Its salts are very numerous. Combined with alumina and potash, it forms alum; with iron it produces copperas; with soda it gives glauber salts; with magnesia, epsom salts; with copper, blue vitriol; with zinc, white vitriol; and with lime, gypsum. The sulphate of lime, or plaster of Paris, being less soluble than the other compounds of sulphuric acid, we usually find more of this mineral in soils,—especially such as are properly drained,—than alum, copperas, glauber or epsom salts. *Sulphur* being an indispensable element in all crops and all flesh, I attribute the value of gypsum mainly to the sulphur which it yields to clover, peas wheat and other cultivated plants. In 100 lbs. of wool or hair, there are five of pure sulphur. If the food consumed by sheep and other animals, contained not an atom of this ingredient, how could their wool, hair, muscles, brains and nerves all abound in this element? Minerals that contain sulphur should be well husbanded. All sulphates are involatile; but most of them are extremely soluble.

Five atoms of oxygen combine chemically with one of phosphorus to make an atom of phosphoric acid. The atomic number of phosphorus is not clearly settled; some chemists making it 31.4, and others only half that number.

Phosphoric acid exists in earths as a phosphate of alumina, iron, lime, magnesia, soda and potash, and often as double salts. Some of these salts are quite soluble,—others not. The phosphate of lime, or bone-earth, is the most important. Suppose nature should organize crops of grass, grain, potatoes, and all the plants which we harvest, as well without a particle of bone-earth as with it? Living on bread, milk, and other food alike devoid of this dissolved mineral, phosphate of lime, which *alone can make bone*, no child could have a bone in its body. I desire to impress on the mind of the reader this truth: a kind and all-wise Providence does not permit cereal and other plants used as food for man and the higher classes of animals, to grow one degree beyond the supply of bone-earth in the soil. Such food would be worse than useless. If animals fail to find their proper nutriment in one place, God gives them power of locomotion to walk, fly or swim to another place, and seek for it there. But upon a stalk of corn has organized a cob and a few kernels at its base, if the stock of raw material fails, no more kernels can possibly grow. If they did, and lacked the elements that a pig must have to form bone, brain and flesh, it would be mighty poor corn for pigs or children to eat for bodily nourishment.

In 100 pounds of dry common salt there are about 60 pounds of chlorine. When free, it is a heavy, green, and very pungent gas. Some 36 parts of this

combined with one of hydrogen, form in water, muriatic acid, or hydro-chloric acid, as it is now more commonly called. As a class of minerals, the chlorides or muriates are very soluble, like the chloride of sodium, or common salt. They do not abound in soils. Common salt has been used as a fertilizer some three thousand years—both soda and chlorine entering into the composition of all or nearly all crops. Most quadrupeds are extremely fond of salt; and all civilized people season their daily food with it. It is curious that potatoes and wheat cannot be salted enough while growing; and that no degree of salting a fatting steer will suffice, so that a little added to a fresh steak will not be an improvement. "Ye are the *salt* of the earth," has not less an agricultural, than a moral meaning.

With regard to the value of lime, magnesia, potash, soda, and iron, in organising cultivated plants, perhaps nothing need be said. I have never analyzed a soil that lacked iron; like silica, iron is not always in a soluble and available form. The practical farmer should understand, that such constituents of plants as are always soluble, a few year's tillage and fair drainage render scarce; and such as are ordinarily insoluble, without the aid of decomposing mould or vegetables, cease in a great degree to yield their nutritive atoms to famishing crops. Bear in mind that between forty and fifty cubic inches of water fall on every square inch of surface in the course of twelve months. If the ground has been cultivated, and really contains the food of plants in a soluble condition, this water will of course dissolve alike the organic and inorganic elements of vegetables. I have frequently washed from ten to fifty pounds of soil in pure rain water as it falls from the clouds, and then filtered and evaporated the water to see what substances were held in solution. I have never failed to get both combustible and incombustible elements, and often nearly equal parts of each. By leaching fifty pounds of soil a few weeks with warm rain water, and then analyzing the matter dissolved out, one can judge with some confidence of its defects and productiveness.

In studying the various processes by which the fertility of a cultivated field becomes impaired, I have been led to believe that much depends on the proportion of the water that evaporates on the earth where it falls, and that which runs off, either on the surface or under it, into springs and rivulets, to form creeks and rivers. Deeply tilled land will absorb twice as much rain water as shallow tilled will; and the former will retain twice as much to carry the crop through a drouth, for evaporation at the surface of its numerous leaves, as will the latter. But most of the cultivated lands in the United States are neither tilled *deeply*, nor uniformly covered with *growing* vegetation, to absorb and fix in its tissues the dissolved food of plants.

The more a soil is stirred with the hoe, cultivator, or plow, the faster the elements of crops are set free by chemical action, and will be lost by solar evaporation, washing and leaching, if such elements are not taken up by growing plants and retained in them. Berzelius found two organic acids in clear spring water, to which he gave the names of "crenic," and "apocrenic," from *krene*, the Greek for a "spring." River water always contains both the organic and inorganic food of plants. The quantity of the fertilizing atoms which is wasted in the planting States, is infinitely larger than one man in a thousand ever suspects. As a similar waste prevails at the North, only much less in extent, I desire to give a clear exposition of my views on this, the practical part of my theme.

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combined with one of hydrogen, form in water, muriatic acid, or hydro-chloric acid, as it is now more commonly called. As a class of minerals, the chlorides or muriates are very soluble, like the chloride of sodium, or common salt. They do not abound in soils. Common salt has been used as a fertilizer some three thousand years—both soda and chlorine entering into the composition of all or nearly all crops. Most quadrupeds are extremely fond of salt; and all civilized people season their daily food with it. It is curious that potatoes and wheat cannot be salted enough while growing; and that no degree of salting a fatting steer will suffice, so that a little added to a fresh steak will not be an improvement. "Ye are the *salt* of the earth," has not less an agricultural, than a moral meaning.

With regard to the value of lime, magnesia, potash, soda, and iron, in organising cultivated plants, perhaps nothing need be said. I have never analyzed a soil that lacked iron: like silica, iron is not always in a soluble and available form. The practical farmer should understand, that such constituents of plants as are always soluble, a few year's tillage and fair drainage render scarce; and such as are ordinarily insoluble, without the aid of decomposing mould or vegetables, cease in a great degree to yield their nutritive atoms to famishing crops. Bear in mind that between forty and fifty cubic inches of water fall on every square inch of surface in the course of twelve months. If the ground has been cultivated, and really contains the food of plants in a soluble condition, this water will of course dissolve alike the organic and inorganic elements of vegetables. I have frequently washed from ten to fifty pounds of soil in pure rain water as it falls from the clouds, and then filtered and evaporated the water to see what substances were held in solution. I have never failed to get both combustible and incombustible elements, and often nearly equal parts of each. By leaching fifty pounds of soil a few weeks with warm rain water, and then analyzing the matter dissolved out, one can judge with some confidence of its defects and productiveness.

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evolving sulphates, phosphates and chlorides in compact, impervious clay, I have seen no one mineral operate better than lime. This is coming into pretty general use at the South to facilitate the renovation or improvement of old plantations. Gov. Hammon, who plants a few miles below Augusta, on the South Carolina side of the Savannah river, has used over 200,000 bushels of unburnt shell lime within the last ten years. I have witnessed its effects the past season with surprise. On well drained swamp lands, its use is most marked and auspicious; although it is serviceable on dry uplands. Thorough draining is an indispensable preliminary to the improvement of ground that needs it. One man has twenty miles of ditches on his farm near this city. Peas are largely used to enrich land, by turning them under with the plow when in blossom. Deep plowing and subsoiling are gaining in the public esteem every month. Domestic animals are fed and kept much under shelter by skilful farmers, in order to save all their liquid and solid droppings from waste by solar evaporation and leaching by rains. Cow yards in the State of New-York often sustain a great loss of the fertilizing elements in manure.

Good husbandry implies the faithful husbanding of all the elements of bread, milk and meat in every change of form which these atoms undergo. Man is incapable of creating one new atom, or of making an atom of sulphur perform the function of an atom of phosphorus, or one of phosphorus do the duty of an atom of lime or silica. If one-third of the land that has been cleared of its native forest was back in woods again, and the other two-thirds cultivated in strict obedience to well known natural laws, the rural industry in the United States would yield a quarter more than it now does. It is impossible, while attempting to go over so much surface, not to waste valuable elements of crops at every turn on the farm. Land in pasture and meadow loses fertilizers far less than plowed fields, unless the latter are managed with skill in abstracting the constituents of plants from the subsoil and atmosphere, as well as from the surface soil. Wood ashes, both leached and unleached, bones, and the contents of the vaults of privies, should be worked up in compost heaps, pounding the bones and applying muck next to unleached ashes, so that the alkalies will neutralize the acidity of the vegetable matter. Cover rotting manure in plowing about as deep as you would a dead cat, to prevent the gases from escaping into the air. If you cover the carcass of the animal with coarse lumps of earth, it will smell badly; but pulverise these lumps fine, and the mellow earth will condense and retain the volatile atoms of the decaying cat. Take the hint and pulverise your soil deep and well, that moisture from below may rise freely, and gases and moisture from above desend without undue hindrance.

The whole population of the world—"a thousand millions of men are dependent for their very sustenance," upon the productions of the earth. Two hundred millions, probably, expend their daily toil in pursuits closely connected with the operations of agriculture,—the parent, and precursor, and most important, of all other arts.

A Cheese was exhibited at the New York State Agricultural Fair, made from one day's milk of 600 cows, by A. E. Austin, Austinburg, Ashtabula Co., Ohio, which weighed 2000 pounds.

SALTING STOCK.

Messrs. Editors:—This subject has been broached without much real effect. An article was first adduced, (page 127, vol.9,) on the impropriety of Salting Swine. The same article was remarked upon by a correspondent of the Louisville Journal, signed G., (page 247, same vol.) G. continues the subject further, questioning the propriety of salting stock in general. I have been patiently waiting a length of time, hoping that some of our practical and scientific farmers would comply with G.'s request and give us the benefit of their results.* But as two or three numbers of the Farmer are at hand since G.'s article of submission, and nothing further upon the subject, I take the liberty to offer a few remarks upon the same.

Salt, is beneficial to stock—for which reason I give it, and would recommend it pretty freely, yet reasonably.

1. When given satisfactory to milch cows salt adds to the properties of their milk, either for butter or cheese. 2. Salt operates upon stock to their healthfulness, by loosening their order of digestion at times when their food is not of that nature, by helping to effect the purification of their blood—thus perhaps alleviating some internal or external disease—by strengthening and invigorating the whole nervous and general system. Of this last item salt operates with the same effect upon both horses and sheep. These conclusions I gained not from my neighbors, but from experience, the sciences, and common sense.

Having given a synopsis of the nature and effect of salt upon stock, I shall proceed to recommend the same as follows: To every ton of hay (when secured,) add 2 quarts of salt. To milch cows let salt lay sparingly in troughs, or boxes before them; also, the same supply for horses in the harness. To a full grown span, or store cattle, give half a pint per head each week. To other stock smaller proportionably.

Of sheep—probably there is no animal that realizes the good effect of salt more than this very kind. It delights me to visit a flock of sheep after a cold storm, or drenching shower, and administer to their seeming wants, a dose of salt. It truly does revive their drooping spirits, and give them energy, by adding strength to their nervous and general system. I have sometimes found on very cold mornings, young lambs so chilled and benumbed with the cold that they could not stand, and apparently were quite lifeless, when by putting a spoonfull of salt in their mouths and leaving them, would, in the course of one hour, find them so revived, that oftentimes I could not catch them. Those who raise sheep can try this experiment and they will see the good effects of salt. Sheep should have one gill of salt per head a week, in fair weather, and should always be salted after a storm or drenching shower. If our wool growers would salt often and freely after shearing, their sheep would brave the change with a better degree of health and strength, particularly if very cold weather followed.

Connected with this subject I have one more suggestion to make, that is—pure water should always be at the option of all animals that are salted.
L. E. B.—*East Bloomfield, N. Y*, 1849.

Remark.—The above was received nearly a year ago; but, being reserved for publication at a more appropriate season, has been overlooked until the present time.

SCIENCE AND PRACTICE IN FARMING.

BY WILLIAM GARBUTT.

MESSRS. EDITORS:—The exhibit at the State Fair was a cheering prospect for the improvement of agriculture. Let public opinion patronize the plow, and the cultivators of the soil will increase their diligence, the scientific man will enlighten their path, the earth will increase its bountiful productions, the comforts of life be increased, social and rational happiness extended, and peace and plenty abound. But these are themes for the barrister and the poet. To settle facts tested by experience, is the proper sphere for the cultivators of the soil.

Science has done much, and yet has much to do for the improvement of Agriculture, but the practical operator must not depend too much on the man of science for his knowledge; he must think, examine and judge for himself, and test by experience the numerous results which have to direct him in his various operations. As our distinguished visitor truly says —"it is only on a basis of often repeated, skillfully conducted, and faithfully recorded experiments, that true theories can ever be successfully built up; hence the importance of experiments in practical agriculture."

The chemist can give valuable suggestions, but the farmer must settle their general result by experience. The time was when it was not known that a tool could be made of iron and steel that would cut stone or even wood; and when the suggestion was made it was of immense value; but the blacksmith had yet to learn to make the axe, and each operator has to learn for himself; and it is equally so with science and the cultivators. The scientific man can enlighten the farmer's path, but the latter must judge for himself which is the best road to travel. Hence the importance of each farmer being an experimenter, and each one's farm an experimental one. No intellegent cultivator ought to allow a season to pass without testing carefully some of the various operations of his multifarious pursuits; and it can easily be done without incurring much expense, for a half or a quarter of an acre is sufficient to test an experiment, if it is performed with care, and close observation.

Our fields are generally cultivated in ridges of equal width; and how easily can a farmer test the value of various manures, by applying the fermented and unfermented, the compost or pure barnyard manure, or any of the numerous fertilizers, on different ridges in the same field? And also test the various modes of cultivation; let one ridge be plowed only once, and the after culture be done with the cultivator and harrow; another ridge plow twice, and a third one three times—and with equal care he can ascertain the quantity of seed that is best to apply, together with the relative value of the numerous varieties of each kind of grain. But he must be attentive, and watch carefully the operation of all his experiments; and ascertain the result with accurate certainty—*not guess at it.*

All experiments ought to be continued for a series of years in succession, for once trying is not a sufficient test, even to a *probability*, so numerous and various are the causes which affect the productions of the soil—causes, too, which are beyond the control of the cultivator, so that he cannot always know how much reward he will receive for his labor. A great proportion of the very bountiful crops that are recorded, are the result of circumstances, which the cultivator cannot foresee, nor control, and are not a fair exhibit of the farmer's skill or good management. For instance, A. sows a piece of ground with wheat, which is very rich. His neighbor B., sows a piece that is very poor. The season is very vegetative, which makes A.'s rich ground produce a tremendous growth of straw, but little wheat; and B.'s poor ground yields a middling crop. But had the season been the reverse, a cold unproductive one, A.'s wheat would have been a bountiful crop, and B.'s nothing. And so it is with all our productions, to a certain extent. There is an adaptation in the fertility of the soil to the productiveness of the seasons—or rather the adaptation of the vegetativeness of the season to the richness of the soil—which is the cause of those occasional wonderful crops, (and is frequently a severe tax on the credulity of the plow-holders,) so that it is necessary in testing experiments to continue them for a series of years, to enable us to arrive at any degree of certainty. And it is equally necessary to have a statement of a farmer's average crops for a number of years, to enable us to judge correctly of his skill as a cultivator, and the value of his practice, or the profit of his farm.—*Wheatland, N. Y., Oct.*, 1849.

MORE LIGHT WANTED.

MESSRS. EDITORS:—In the October number of the Genesee Farmer was a communication from Caledonia, giving the products of ninety-six acres of improved land in that town. He states that when the farm was bought, some two years since there was 85 acres of wheat on the ground, the sale of which, after reserving 170 bushels for seed and bread, amounted to $2,593 73. The sale of barley, wool and fat sheep the same year amounted to $167 62. The second year he harvested 70 acres wheat, which yielded 2190½ bushels. He likewise sold 450¾ bushels barley, 100 bushels corn, and 332 pounds wool. The same year he sowed 80 acres of wheat. Now the inquiry is, what was the system of rotation?—how much stock he kept, and the number of acres in grass and root crops? Likewise how much ground was occupied by his buildings and garden? saying nothing about what may be occupied by roads and fences. Full and minute details of his system of farming might satisfy the doubts of incredulous

RIDGEWAY.

PEAR TREE BLIGHT.

THE "*Young Digger*" in your November number has attacked correspondents innumerable, who by observation and experience have been endeavoring to find the causes of Potato Disease, Fungus on plum trees, and "last, though not least," Blight on Pear Trees—and he has concluded himself to be for a youngster a "*very sage.*"

Would that he could tell us something preventive of the Blight in Pear Trees. That is what I am after. His criticisms may pass for what they are worth. It is no small satisfaction to me that Mr. BARRY, your able coadjutor was willing to notice my article on "*Pear Blight*" and also to find many *old diggers* to say that in the main I was right in my ideas of the cause and remedies for it. Perhaps the blight will cease after his year—I trust so, then the Young Digger can ponder on something else. I will leave him with the "potato rot." JAMES H. WATTS. *Rochester, Nov.*, 1849.

STEAMER.—COOKING FOOD FOR STOCK.

The following remarks in reference to the plan of steamer above represented, and cooking food generally, are taken from the American Agriculturist:

"If food is to be cooked, on a small scale, boiling may be cheapest; if on a large scale; steaming is not only cheapest, but infinitely more compact; for the former would require a very large, or several furnaces, for different sets of kettles, whereas, the latter may be done with one small furnace, steamer, and pipe, as shown in the cut, with any reasonable number of vats or tubs surrounding, in which to steam the food. In order to do this, the steam pipe must be made moveable, with a screw, flexible, or be composed of some material that when the food is cooked in one tub, the pipe can be turned and inserted into another. We have seen no less than five tubs, holding 150 gallons each, surrounding a small steamer, all of which could be filled with food and cooked within twenty-four hours. Three tubs, however, are usualy sufficient for a large stock, in which the food of the first may be cooking, that in the second cooling, while that in the third is being fed out. A single person may be able to oversee, and efficiently manage all these operations.

The furnace, steamer, and tub, are so plainly delineated in the above cut, that they need no explanation. In cooking potatoes and other roots, the tub should have a false bottom (as represented,) perforated with numerous small holes, and set resting on blocks from 3 to 4 inches above the true bottom. The steam-pipe should enter the tub nearest to the true bottom. The steam is thus introduced between the two bottoms, quickly rises upward, and is evenly diffused through the whole of the food. While the cooking process is going on, the top of the tub should be kept down as tight as possible, so as to prevent the escape of any steam. In cooking grain or meal, the false bottom must be taken out and the tub filled with water, as the steam heats the water and brings it to a boiling point as readily as a blaze or hot coals around a kettle.

Steaming is said to do its work more thoroughly than boiling, as it is so insinuating, it easily enters and bursts all the minute globules in the grain and vegetables. Be this as it may, certain it is, that either process renders the food more digestible, and easier assimilated by the absorbing vessels, and therefore more economical.

The following table in the Edinburgh Journal of Agriculture, shows very nearly the increase of bulk of different kinds of grain boiled to bursting:

4 meas.	of oats increased to		7 meas.
4 "	barley "		10 "
4 "	Indian corn increased to		13 "
4 "	wheat "		10 "
4 "	rye "		15 "
4 "	beans "		8½ "
4 "	buck wheat or bran		14 "

Boiled food, especially in winter, is much more nutritious, if fed as nearly blood warm as possible. If quite cold, or above all, if in the least degree frozen, we doubt wether it is so beneficial as if uncooked—grain and meal we are certain are not; for animals will eat the raw, cold, more greedily than they will the cooked. Stock fed upon cooked food will eat more of it than if uncooked, and lie quicker to rest. Of course all this is better for them, as they will thrive faster, look finer, and do more work. It is particularly beneficial to give hard-working horses or oxen, just as much wholesome cooked food, as they can eat, soon after coming in at night. Toiling all day in the open air, man apreciates and knows well the benefit of a warm, hearty supper. Let him remember, then, that a warm mess and abundance of it, is equally beneficial to the animals which a kind Providence has given him as efficient aids in his arduous labor. If southern planters also would give their mules cooked instead of raw food, at noon and night, we are persuaded it would put an end to the colic, so often destructive among them. Cooking would also considerably economize the food."

SALT FOR SWINE.

Eds. Gen. Farmer:—I notice that some of your correspondents doubt the propriety of giving salt to hogs—some going so far as to imagine that it will kill them. This does not accord with my experience. My hogs get salt in their slop while pigs, salt once a week while grazing on clover during the season previous to fattening in the fall, and after they are put up to feed, salt twice a week till driven off. None of them die or are made sick by it. On the contrary, I notice that they eat corn for a while, then go and take a little salt, then a little water, and back to the corn again.

If hogs are not accustomed to the use of salt it will make them vomit once or twice at first, but this does them no harm. Salt them regularly, a dessert spoonfull to the hog twice a week, and a table spoonfull or two of wood ashes, unleached, and they will more than pay for the trouble and expense. L. M.
Bourbon Co., Ky., Oct., 1849.

Galls from Harness or Saddle.—"A Volunteer" tells the New England Farmer that the following remedy was found to be invaluable in the fatigueing marches in Mexico:

White lead, finely pulverized, is the most effective application. Rubbed on dry, or made into a paste with milk, and applied a few times; it will also prevent white hairs growing on galled places.

To Cure Bloating or Hoven in Cattle.—A table spoonful of spirits of hartshorn, for an ox or cow, or a teaspoonful for a sheep, will afford instantaneous relief. It should be diluted with water or milk. It acts by decomposing the gas generated in the stomach, which is the cause of the disease.

MODEL LETTERS.

Among the various *models* offered to the public "about these days," we beg to contribute our mite for the benefit and edification of all interested. Our object in giving the annexed Letters, which are certainly models of taste and brevity, is two-fold. First to present those who wish to "go and do likewise" with an excellent example—and secondly, to assure all such that we can promptly fill, and shall be most happy to receive similar orders for back volumes of the Genesee Farmer. The valuable reading and instruction on Agriculture and kindred subjects, embraced in the five voluumes of the Farmer published in octavo form, (from 1845 to 1849 inclusive,) is worth far more than cost to any practical, thinking farmer or horticulturist—and the same amount of like knowledge can no where else be obtained so readily and cheaply. But, to the "models":—

Mr. D. D. T. Moore:—Enclosed I send $5 on the "Market Bank," Boston, Mass., for which send me the back volumes of the Genesee Farmer—6, 7, 8 and 9. The remaining $3 I wish to make me a subscriber for the next eight years—commencing 1st January, 1849.

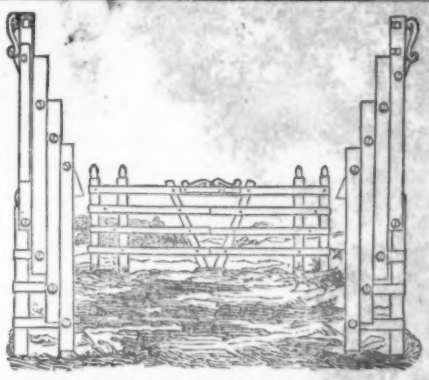
I hailed with joy the appearance of your advertisement in our principal paper, and trust that many of our farmers will answer the call. I have thus far endeavored to procure no subscribers, knowing that with a single number of your valuable paper in my hand, I can do more in an hour than I could otherwise in a week.

The farmers of central Indiana are beginning to cheer up since the rail road has been completed to the Ohio river; and I have no doubt but that your subscription list will be increased from this quarter. Calvin Fletcher, Jr.—*Indianapolis, Ind.*, 1849.

Mr. Moore:—I send you $3 enclosed for the Genesee Farmer. Please forward volumes 6, 7, 8 and 9, bound—volume 10 when bound, and volume 11 as published. Send the four volumes that are bound by Express—the other volume and numbers by mail. Hutchins Wight. *Waterloo, Seneca Co., N. Y., Nov.* 1, 1849.

Weevil.—*Caution to Farmers.*—The Hon. E. Blackman, of Newark, N. Y., exhibited to the writer samples of Timothy Seed obtained by him at Buffalo, which was literally alive with weevils. The seed was understood to be ftom Ohio; and most of the seed from many parts of that State, having been obtained from grass in the wheat crop, the weevil falls into their timothy seed and thus is sown broadcast over the land. As the insect lives through winter, or, in some other way appears in the same locality every season, it may be possible that the sowing of this seed containing them may hasten the general prevalence of that dread scourge throughout the entire wheat growing section of our State. Ought not farmers to be on their guard against thus distributing destruction to their crops of wheat? W.

Agricultral Papers.—Every farmer can well afford to take a good agricultural paper, to assist him in the erection of suitable buildings and fences; the making and saving manure; the selection of agricultural implements; the best kinds of stock and fruit; the feeding and fattening of cattle; the management of his land and crops—thus obtaining the united wisdom and experience of the best practical farmers, not only of our own country, but of the civilized world. I have known farmers to lay out through mismanagement, within the short period of a year, enough to pay for *one hundred* copies of any agricultural paper published in the land. L. Freeman Thurber.—*Washington, Vt.*, 1849.



SMITH'S VERTICAL GATE.

The attention of the public is requested to the above gate, recently invented and patented by Lorenzo Smith, of Easton, Mass. The above cut represents a large gate open and a smaller one shut. This gate does not *swing*, but opens *vertically* by a parallel movement of rails. Its superiority to the gate in common use may be readily seen. As it does not swing, there can be no sagging; thus avoiding a great objection to the swing gate. It requires no ground to swing upon; consequently it can be opened or shut while teams, carts, or carriages are standing close to it, or with a snow bank on both sides of it. It is opened and shut much quicker than the ordinary gate, and a man on horseback can open it without alighting. For very heavy gates it is designed to have weights attached to the ends of the rails, to assist in raising them; but gates of ordinary size do not require weights. This gate is more especially intended for carriage ways, but is admirably calculated for the doors of stables, and other places where the common gate cannot be used, and also may be made single for footpaths and narrow passages. It costs no more than the swing gate, (including the posts,) and is less liable to get out of order, and more easily repaired, if repairs are needed. The practical operation of the Vertical Gate has been thoroughly tested, and, so far as known, meets with universal favor.—*New England Farmer.*

Husk Beds.—Now (the husking season) is the time to secure the best and most durable under beds. All the inner husks of the corn should be saved for this purpose. True, it takes a great many to make a bed, but when once the sack is filled, it is a bed for life, and it is the lightest and softest thing of the kind that one could desire. The husks curl up and they dry and never mat down afterwards. Moreover no insects ever lodge in them, as vermin do in straw. They are perfectly cleanly; and being of a stong and tough texture, they will not wear out for years. We regard a good husk bed as cheap at $5. A young married couple, to the end of life, however long, will have no occasion to fill a new under bed, if they once have their sacks filled with good, soft, well-dried corn husks. We had all ours filled fifteen years ago, and they are to this day "good as new."—*Maine Cultivator.*

'The tree is known by its fruit." The only exception to this is the *dog*-wood, which is known by its *bark!*

A STRAY LEAF FROM A MANUSCIPT WORK.

What change takes place in a kernel of wheat or other seed when it is about to put forth its *germ*?

By the influence of *heat, air* and *moisture* the *starch* in the seed is converted into *sugar*. The quantity of sugar thus formed is often sufficient to make bread quite *sweet* to the taste when made of wheat which was a "little grown."

Is *starch* an important substance in the economy of organic life?

It is. And its properties, and component parts should be carefully studied.

How many simple elements enter into the composition of starch? Three.

What are they?

Carbon, Oxygen and Hydrogen.

Whaf are the propcrtions of carbon oxygen and hydrogen in 100 lbs., of starch?

According to Dr. Prout 100 parts of starch dried at 212° contain,

Carbon	44	per cent or	12 atoms.
Hydrogen	5,2	" "	10 "
Oxygen	49,8	" "	10 "
	100		

In what respect does the composition of sugar differ from that of starch?

Starch and sugar are composed of the same simple elements, and in the same proportions, and yet starch and sugar are different substances.

How is that?

There are many changes in the *form* and *properties* of matter without any addition or diminution of the substances thus affected. Water is a *liquid* when its temperature is below 32°; but crystallised and solid like a rock when cooled much below that point. The same elements—oxygen and hydrogen—and in the same proportions, may be at one time *solid* ice, at another a *liquid* and another a *gas* or air.—So, the same compound of carbon and water, may be at one time *woody fibre*, at another *starch*, and then exist in the form of *gum* or *sugar*.

What portion of a ripe wheat plant is carbon and water?

Not far from 94 per cent.

What are the releative proportions of oxygen and hydrogen in water?

If 7 pounds of oxygen gas be mixed with one of hydrogen and set on fire, they will explode and condense into 9 pounds of water.

Suppose 10 lbs. of oxygen be mixed with one of hydrogen and fired with an electric spark, what will take place?

Only 8 lbs. of the oxygen will unite with the hydrogen, leaving 2 lbs. of oxygen uncombined and floating like common air above the artificial water.

To what general law is this result atributable?

It is atributed to what is called the law of "Definite Proportions."

Explain what you mean by the "law of definite proportions?"

You wil see in the above table of the component elements which make starch that while six and two-tenths per cent of hydrogen make 10 atoms in the compound substance called starch, 49.8 per cent. of oxygen make precisely the same number of atoms.

How do you explain this result?

This result arises from the fact that, eight ounces or pounds of oxygen are *equivalent* to one of hydrogen. In other words one atom of oxygen is eight times heavier than one atom of hydrogen. Hence if we divide 49.8—the proportion of oxygen in starch—by 8, the product will be very nearly 6.2, or the proportion of hydrogen.

If *one* is the proportional number of hydrogen and *eight* the proportional number of oxygen, what is the proportional number of *carbon*, which you say is the other constituent in starch, woody fibre, gum, oil and sugar.

Six is the proportional or equivalent number of carbon.

How do you prove this?

If 6 ounces of carbon is burnt in 16 ounces of oxygen—2 proportionals—the carbon and oxygen will all combine and form 22 ounces of carbonic acid. All chemical combinations are governed by the law of definite proportion; otherwise neither water nor common salt, nor other compound body would be uniform in character.

Pioneer History of the Holland Purchase of Western New York: Embracings ome account of the Ancient Remains; a brief history of our immediate predecessors, the confederated Iroquois, their System of Government, Wars, etc.:—A synopsis of Colonial History: some notice of the Border Wars of the Revolution: and a history of Pioneer Settlements under the auspices of Holland Company;—including Reminiscences of the War of 1812; the origin, progress, and completion of the Erie Canal, etc., etc., etc., By O. Turner. Buffalo: Published by Jewett, Thomas, & Co. 1849.

The Publishers are entitled to our thanks for a copy of this work—a large and beautiful volume of 666 pages.—From a cursory examination, we consider it an intelligent historical narrative, of no little value to the citizens of a large district of Western New-York. It must prove peculiarly acceptable and interesting to "the surviving pioneers and descendants of pioneers of the Holland Purchas," to whom the volume is inscribed. While the contents are creditable to the author, the handsome manner in which the book has been issued is noticable. It is neatlyembellished—embracing lithograph portraits of the most prominent pioneers, and agents of the Holland Company; also appropriate wood engravings, County Maps, &c.—and proves that its enterprising Publishers possess superior facilities for book-making. For sale in this city by Sage & Brother, and D. M. Dewey,—and booksellers generally throughout Western N. Y.

Editors of the Genesee Farmer.—In addition to P. Barry, Esq., conductor of the Horticultural Department, the Proprtietor is happy to inform the friends and patrons of this Journal, that he has secured the editorial services of Mr. James Vick, Jr.—a gentleman who has, under various signatures, contributed some of the best articles in the present volume of the Farmer. Mr. V. will devote his time to the business of the office during the year 1850.

The following item should appear in the Horticultural Department of this number, but did not come to the printer's hands until the pages of that department were stereotyped:—

The conductor of the Horticultural Department of the Farmer wishes, at the close of the volume, to apologize for the defective manner in which, from absence and other interruptions, he has performed his duties during a considerable portion of the year. He does not anticipate such to the same extent, during the ensuing year, and hopes that with more regular attention, and the greatly extended field of experiment in Pomology and Horticulture in general, of which he can now avail himself, he will be able to make this department more valuable and interesting than it has ever been. He solicits a continuance of favors from cultivators, such as specimens of fruits and useful facts relating to the culture and management of the garden and orchard.

Correction.—The following note should have appeared in a previous number, but was overlooked:—

Messrs. Editors:—Will you correct an error which appears in my communication relative to Merino Sheep, published in the September number of the Farmer, [page 211.] The first line of the second paragraph reads, "Last Spring I sheared 25 full blood Merinos," &c. Instead of twenty-five, it should read *one hundred and twenty-five*—an essential difference. Reed Burritt.—*Burdett, N. Y.*, 1849.

HORTICULTURAL DEPARTMENT.

EDITED BY P. BARRY.

THE CONGRESS OF FRUIT GROWERS.

On page 280 of our last volume will be found the list of fruits adopted by this body, last year, for general cultivation. And we now copy from the Horticulturist the list of varieties adopted and rejected at the late session. An important step has been taken, and not the least of it is the striking off 100 indifferent or worthless varieties of pears, and some 26 of apples. Among these rejected sorts there are a few that we would have reserved—for instance, the *Golden Reinette Apple*, and the *Caillot Rosat* or *Summer Rose* and *Cuvelier Pears*. We care little about these, any more than we could name 50 other apples, and 100 other pears equally, and in some cases much more deserving of being cast out.

Again, in the adopted list we know that some of the very best of fruits are yet left out; but that is no detriment to them—they will be cultivated none the less. It should be well understood that these lists of adopted and rejected varieties were made out by a few of the Boston pomologists. To be sure they were sanctioned by the Chairman of the General Fruit Committee, and by the Convention at large, but the experience on which the list was first made was that of a few cultivators around Boston. This will account for such as the Vandevere and Wine Apples being adopted, and the Northern Spy and Melon being left off—the former varieties, in our opinion, are not worthy of comparison with the latter.

The list was first presented to the Convention as "the report of the Massachusett's Fruit Committee," and contained a great many more varieties, both adopted and rejected, than appears in it now. We were in favor, and so were many others, of receiving it and placing it on the minutes entire, as the report of that committee. This would have shown the actual experience of that section, when other committees, from other places would have reported in a similar manner. We then should have had their experience—thus would have been collected in an unerring manner the good and bad of every region. Its adoption as "the report of the General Fruit Committee," was, however, pressed upon the Convention, whilst a fraction only of that Committee had an opportunity of examining it, or bringing their experience to bear upon it, more than to simply say *aye* or *no* to its adoption or rejection in Convention.

We allude to this matter, not for the sake of manifesting opposition to what has been done, but for the purpose of expressing our own opinion, and the reasons for it, that the General Fruit Committee should not report on behalf of the country at large, as they will be supposed to do, until the various local committees have been heard from or consulted. The past season was highly unfavorable, in most parts of the country for the preparation of reports, and hence but few were presented. The plan of acting on the report, however, was very safe. Any variety that a single plen was offered for or against, was struck off.

The discussions on the qualities of fruits, their peculiar excellencies and defects in various localities, were of great interest and importance to cultivators; indeed, this is the pith of all the doings, and as soon as the printed proceedings appear, we shall glean the most valuable for the benefit of the readers of the Farmer.

LIST OF FRUITS FOR GENERAL CULTIVATION.

PEARS.

Rostiezer,	Vicar of Winkfield,
Andrews,	Uvedale's St. Germain, or Pound,
Fondante d'Automne.	Louise Bonne de Jersey,
Fulton,	Uvedale's St. Germain, *for baking*
Urbaniste,	

APPLES.

Swaar,	Bullock's Pippin.
Porter.	White Seek-no-further,
Fameuse,	Winesap,
Vandevere,	Lady Apple,
Hubbardston Nonsuch,	Wine Apple,
Danvers Winter Sweet,	Red Astrachan

APRICOTS.

Large Early,	Moorpark.
Breda,	

NECTARINES.

Downton,	Early Violet.
Elruge,	

GRAPES.

(for culture under glass.)

Black Hamburgh,	White Frontignan.
Black Prince,	White Muscat of Alexandria,
Black Frontignan,	Chasselas of Fontainbleau.
Grizzly Frontignan,	

(for open culture.)

Isabella,	Catawba.

CURRANTS.

Red Dutch,	May's Victoria,
White Dutch,	White Grape.
Black Naples,	

GOOSEBERRIES.

Houghton's Seedling,	Laurel,
Woodward's Whitesmith,	Ironmonger,
Crown Bob.	Early Sulphur,
Red Champagne,	Green Gage,
Warrington,	Green Walnut.

RASPBERRIES.

Red Antwerp,	Fastolff.
Knevett's Giant,	Yellow Antwerp.

STRAWBERRIES.

Large Early Scarlet,	Hovey's Seedling.
Boston Pine,	

The following list was adopted by the convention as new varieties, which "give promise of being worthy of being added to the list for general cultivation."

PLUMS.

River's Favorite,	McLaughlin.
St. Martin's Quetsche,	

PEARS.

Beurre d'Anjou,	Paradise d'Automne,
Doyenne Boussock.	Van Assene,
Manning's Elizabeth,	Jalouise d'Fontenay Vendee,
Doyenne d'Ete,	Chancellor,
Striped Madeleine,	Ananas d'Ete
Duchess d'Orleans,	Brandywine,
Pratt,	Ott.

STRAWBERRIES.

Burr's New Pine,	Jenny's Seedling.

LIST OF REJECTED FRUITS.

APPLES.

Gloucester White,	Large Red Sweeting,
Henry's Weeping Pippin,	Red Doctor,
Gray House,	Grand Sachem,
Red Ingestrie,	Beachamull's,
White Ingestrie,	Cathead,
Lord Nelson. (Kirke's)	Caroline. (English.)
Marmalade Pippin,	Dodge's Early Red,
Rowland's Red Streak,	Fenouillet Rouge,
Woolston's Red Sweet,	French Gray, Reinnette
Woolston's White Sweet,	Muscovia
Golden Reinnette,	Irish Peach,
Pennock.	Pigeonette,
Hoary Morning.	Salina.

PEARS.

Croft Castle,	Green Sugar,
Alexander of Russia,	Gros Blangart,
Admiral,	Green Chisel,
Aston Town,	Hays,
Autumn Bergamot,	Hathorne's Seedling,
D'Amour	Horticulture,
Angers,	Hastivea,
Beurre d'Anglerterre,	Ipswich Holland,

Beurre Sentin,	Jargonelle. (of the French)
Beurre of Boswiller,	Kramelsbrine,
Bon Chretien d'Esperen.	Lincoln,
Bon Chretien of Brussells,	Louis of Bologna,
Bergamotte Sylvange,	Lederbrine,
Bergamotte Fortunee,	Louis Bonne,
Beauty of Winter,	Lansac,
Belmont,	Madam Vert,
Bezi Vact,	Millar's Seedling,
Bruno de Bosco,	Marquis,
Blangent a longue guene,	Marcelis,
Bingo Master,	Navez,
Cuvelier.	Orange,
Chat Grille,	Orange Tulippe,
Chain a Dame.	Phillips,
Charles Van Mons,	Pittfow,
Cassolette,	Platt's Bergamot,
Compte de Frasuel,	Fasse Long Bras,
Copea,	Princes Portugal,
Caillat Rosat,	Pope's Scarlet Major,
Clara,	Pitt's Marie Louise,
Clapp,	Royal d'Hiver,
Citron de Sierens,	Rouse Lench,
Dearborn of Van Mons,	Rousselett St Vincent,
Downton,	Sans Pepins,
Duquesne d'Ete,	Swan's Egg,
Doyenne Mons,	Surpass Meuris,
Deschamps' New Late,	Saint Bruno,
Dunbarton.	Swiss Bergamot,
Doyenne Diere,	Sousreine,
Endicott.	Sickler,
Elton,	Thompson of N. Hampshire,
Frederic of Prussia,	Tucker's Seedling,
Famenga.	Trubserherds Dulle,
Forme Urbaniste,	Whitfield,
Fantasie Van Mons.	Winter Orange.
Forme des Delicas	Wurtzer d'Automne,
French Iron,	Yutle,
Green Zair,	Crassane.
Grise Bonne,	Winter Crassane,
Garnstone,	Citron of Bohemia,
Green Catharine,	Madotte.

HINTS FOR THE SEASON.

Up to this time, (Nov. 16,) the weather has been remarkably mild here. Many border plants, such as Monthly Roses, Scarlet Geraniums, Phloxes, Salvias, Pansies, Mignonette, and many late blooming annuals, are yet in full bloom—looking better, indeed, than at any previous period this season. Dahlias even were not injured till about a week ago, and this is quite unusual with us. But with this mildness we have had immense quantities of rain; every third or fourth day has been rainy since about the first of October. Just at this time the weather is delightful, and is affording to every body who heeds it a fine opportunity for completing in a proper manner their out door planting and gardening matters.

Transplanting will now be finished. It should be remembered that fall planted trees are not safe until properly staked and mulched with manure or litter, to guard the roots against the effects of frost, and every precaution should be taken to prevent water from lodging about the roots, in the slightest degree, as it is almost certain death. All trees and shrubs that are in any degree tender should, in addition to staking and mulching, be protected with a sheathing of straw tied *loosely* around them. Many trees and shrubs that are perfectly hardy when well established, require care of this sort the first or second year after planting. A simple and effectual way of protecting young plants of rare evergreens, that cannot be wrapped up in straw is to place a small box or barrel over them, after being well mulched. *Strawberry Beds*, particularly those recently made, should be covered a few inches deep with leaves. *Raspberry Canes* should be laid down and covered slightly with earth. Some seasons this is quite unnecessary, but it is always safe, as it insures a crop next season, whatever the winter may be, and the labor required is a mere trifle. The large plantations of market growers, near New York, are all protected in this way. Bulbous roots, such as *Hyacinths*, *Tulips*, &c., should have a covering of leaves or straw to prevent the frost penetrating to the bulbs or drawing them to the surface. In cases of newly planted beds this is quite indispensable.

Rare or delicate *Roses* should all be carefully protected. Standard or tree roses are best managed by taking them up and wintering them in the cellar with the roots in the ground, and planting out again in the spring. This is the practice in France where the climate is not unlike ours, and where in many cases, whole acres of these rose trees are grown. Transplanting has a good effect upon them. The tops are always well cut back, when planted out, and this encourages a strong growth of flowering wood during the following season. If not taken up, they should be securely staked and the trunk well protected with straw, and a good mulching of manure or litter be placed around the roots. We allude to these matters because we know that many persons are now planting such things, that do not possess the necessary information to take care of them, and will most likely treat a rose tree as they would an apple tree.

Carnations and *Monthly Roses*, and many half hardy border plants may be wintered nicely in a little pit, some three feet deep, with a common hot-bed frame in it and covered with glazed sashes or boards and matts, or straw, and well lined around the outside with manure, or banked up with earth. Such pits as these are valuable to persons who have no green house, and if well managed answer every purpose. They will require occasional airings in mild weather, removal of dead and decaying leaves and wood, and a sharp look out always for vermin.

Every spring we hear people tell about losing their *Dahlia Roots*. They either *freeze* or *rot*. The roots after being taken up should be well dried in the sun, or if that cannot be done, near a fire, and then be put away on a shelf in a dry place. A little heat will do them no harm. A damp cellar is sure to rot them. They should be frequently examined and the decaying portions of the stem or tubers removed. A very good way is to put them, after being dried, in perfectly dry sand—dried by a fire.

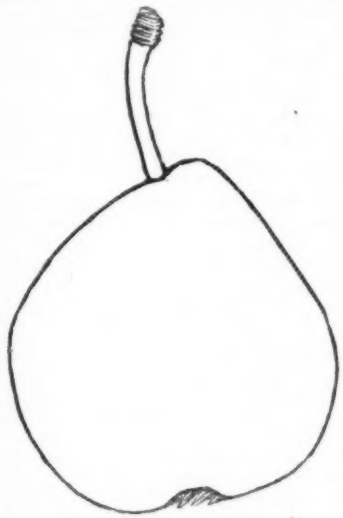
Rubbish of all sorts, piles of brush, stone, &c., that afford harbor for vermin, should never be permitted around a garden or orchard, and long grass or weeds in the neighborhood of trees is highly dangerous. For the amount of a days labor of a man (costing 75 cents) in removing such nuisance, whole orchards of trees are sometimes ruined, and hedges too. Towards Autumn people are too apt to slacken their culture, and allow weeds and grass to run wild—imagining that it will do no harm while growth is suspended, but experience to the contrary is often dearly bought.

Trenching, spading and manuring of gardens, and spading and manuring around neglected trees, should proceed now, as long as it is possible to work the ground. It is the period of the year when most leisure is enjoyed by all classes of people, besides it is the very best period for performing this work.

Fallen leaves should all be cleanly raked up from the garden walks, grass plot, and all around the premises, and be carried to the compost heap. If left where they are they become decayed before they are removed in spring, and injure the grass, and harbor vermin during the winter.

DESCRIPTIONS AND FIGURES OF TWO FINE PEARS.

THE FORELLE OR TROUT PEAR.—This is the *Forellenbrine* of the Germans, and *Poire Truite* of the French, one of the most beautiful and at the



same time one of the most excellent of pears, and so distinct in the coloring of the fruit and the appearance of the tree as to distinguish it at the first glance from a thousand sorts. For four or five years past we have had it bear every year, and the more we see and know of it, the more we admire it. It was described and figured in Hovey's Magazine of August, 1847, and the description is so excellent that we choose it instead of giving our own description, as giving additional authority on the subject. We must remark, however, that the size of Mr. HOVEY'S and Mr. DOWNING'S cuts are rather larger than we find it on an average. It is always a trifle below medium with us.

The Forelle is, without doubt, the most beautiful pear which has ever been produced, and would deserve cultivation for its appearance only, if it were even a second rate pear. But it stands almost as high for its excellence as for its beauty. Dr. Diel, in his *Pomology*, speaks of the Forelle as competing with the best French varieties, and Mr. Thompson states that it "merits his eulogium in all respects."

The Forelle takes its name from the resemblance of its beautifully speckled skin to the Trout, and, in the French collections, it is generally called the Truite pear. When the fruit is produced in perfection, it is deeply colored with vermilion, and profusely covered with grayish russet dots, which are margined or rayed with crimson. The tree grows very rapidly, more resembling, in the color of the wood, which is of a rich violet red speckled with grayish white, an apple than a pear: young shoots woolly: leaves, roundish ovate. It is very productive, and grows either; upon the quince or pear stock.

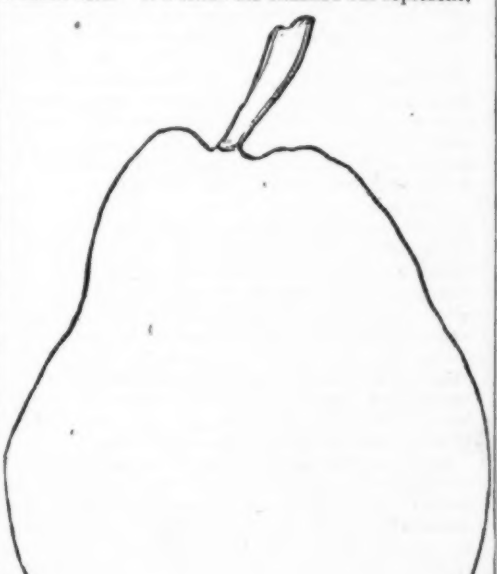
Mr. Manning, who described it among the many kinds which he proved in his collection, (Vol. III. p. 49,) stated that with him it had not come up to the character given it in the *Pom. Mag.*, but we suspect he had not produced it under favorable circumstances. Our drawing is from a specimen produced in the collection of Mrs. Heard, of Watertown, in 1846, and, in beauty as well as quality, it was a first-rate fruit. Where the locality is unfavorable as a dwarf or standard, we would recommend it as deserving a wall or an espalier.

Size, large, about two inches in diameter, and three long. *Form*, oblong obovate, regular, rather the largest in the middle, and tapering to an obtuse point at the stem: *Skin*, fair, smooth, dull yellow in the shade, broadly shaded with vermilion on the sunny side, and beautifully speckled with grayish dots, which are deeply margined with crimson: *Stem*, rather short, about three quarters of an inch, slender, nearly straight, and obliquely inserted in a small, shallow, contracted cavity, with a swollen lip or projection on one side: *Eye*, medium size, partially open, moderately sunk in a small and rather abruptly depressed basin, segments of the calyx broad and closed up, little reflexed: *Flesh*, white, very fine grained, buttery, melting and juicy: *Flavor*, rich, sprightly, vinous, slightly perfumed and excellent: *Core*, medium size: *Seeds*, medium size, nearly black. Ripe in November, and frequently keeps till January.

Mr. DOWNING in his Fruits and Fruit Trees says —"It fully sustains its high foreign reputation with us."

BEURRE GRIS D'HIVER NOUVEAU.—This is a large and fine pear of the first quality, quite rare yet in American collections. We imported it from France in 1846. In France and Belgium it is considered one of the best pears, and is invariably included in the smallest and most select assortments. From what we have seen of it here, we have not the least doubt but that it will prove equally fine in this country. The tree is rather slow in growth, but upright and exceedingly prolific, even to a fault. The young wood is reddish, bearing considerable resemblance to that of the old *Brown Beurre*, but the habit of the tree is different. Our tree is on a quince stock.

The fruit is large and somewhat irregular in forms some quite pyriform, as the *Bartlett*, and othere more obtuse, like a *Beurre Diel*, while others ars rounder still. We think the annexed cut represent;



the most ordinary form. The skin is covered with a rich cinnamon russet, and usually a faint tinge of red on the sunny side. Stalk stout, about three-fourths of an inch, inserted in a slight cavity, frequently under a fleshy knob. Eye small, in a shallow cavity.

Flesh white, fine grained and melting. Juice abundant, sprightly and perfumed, like the old *Brown Beurre*, but less astringent.

To our taste there is no better pear than this. A gentleman from Indiana, a thorough lover of fine fruits was in our office in October and picked up and ate a nice old *Brown Beurre*. After finishing it he said, "Well, I have eaten a good many of your best pears lately, but none so good as that—I must have a few more trees of it." What would he say if he had a slice of this?

This variety is noticed in Hovey's Magazine, vol. 14, page 110:—"A new and decidedly valuable acquisition to our late pears; possessing qualities similar to the old *Brown Beurre*, but less acid and fully as high flavored. It also ripens freely, and the skin is of a rich cinnamon russet." Rivers says of it, (see Horticulturist, vol. 2, p. 476)—"In shape much like the *Easter Beurre*, and equal to it in size. This is a most abundant bearer as a pyramid on the quince. Flesh melting and high flavored, and ripens from end of December to end of January, or later."

CAUSE OF THE PEAR TREE BLIGHT.

Messrs. Editors.—Noticing in the last number of the Farmer some remarks of Mr. James H. Watts, on the subject of the Pear Blight, and noticing also a request that others would communicate their experience on the subject through your columns, I am inclined to give you mine.

I have five pear trees adjacent to each other, which are of about twenty-five year's growth. Three of them stand in a yard which has, I think, never been cultivated since the trees were set. I have several times within the last five years given them a dressing of leached ashes. The other two trees are enclosed in another yard which has been cultivated for a few years past. They were all of them healthy, bearing trees up to 1848, when four of them were struck with blight—all of those in the uncultivated ground, and one of those in the cultivated. I pruned off all the affected branches, and the last spring they put out and grew vigorously for a time, but in the month of June the blight began to make its appearance again, which has continued, till now the tops are nearly all dead. The other tree, standing in the cultivated ground, and the most thrifty growing tree of the five, continued healthy and vigorous. I have also a number of dwarf pear trees in my yard. The ground has been spaded and manured around them every spring since they were set. Most of them have grown well, and are healthy—one of them only has been troubled with blight, and that the slowest growing and most puny tree in my yard.

I had occasion to pass through the orchard of one of my neighbors in September last, and observing several fine bearing pear trees, I inquired of the owner if his trees were ever affected with blight—he said not in the least. His orchard had been planted in corn the past season; it had also been frequently manured, plowed and hoed.

Our soil is a common limestone soil, with a subsoil of marl and clay, intermingled with limestone gravel. From my own experience and observation I am satisfied that Mr. Watts' conclusions are erroneous. I think that a uniformly cultivated and enriched soil, which will keep the trees in a steady growing condition will render them most healthy and best able to resist blight. F. R. P.—*Sweden, N. Y., Oct.*, 1849.

ANSWERS AND ACKNOWLEDGMENTS.

Grapes.—(N. Simons, Castile.) Your seedling Grape is a large fine variety of the wild Fox Grape, quite unworthy of cultivation, in our opinion, compared with the *Isabella* and *Catawba*. A gentleman of this city, M. G. Warner, Esq., cultivates the same, brought by him from Connecticut.

Apples.—We are indebted to Mr. Andrew Cone, of East Bloomfield, for apples "taken from a seedling tree 55 years old—first rate for cooking and good for eating." This is a beautiful yellow apple with a red cheek, resembling the *Bellflower* in shape. We are sure it is first rate for cooking, and as Mr. C. says it is very productive, is no doubt valuable at this season.

Munson Sweeting.—We are indebted to Mr. Jesse Storrs, nurseryman, of Marathon, N. Y., for a box of this delicious sweet apple. We are sure it is identical with the Northern Sweeting, exhibited at New York by Jonathan Batty, of Keesville—one of the very best sweet apples for fall use we have seen. We will give a farther account of this apple at another time.

Pears. *Oswego Beure.*—We are indebted to J. W. P. Allen, Esq., of Oswego, for specimens of the *Oswego Beurre*, in perfection; and they fully confirm the high opinion expressed by ourselves and others in regard to the fruit. It is truly one of the very best American pears. The flavor is almost identical with the *New Winter Brown Beurre*, figured in this number, and if eaten in the dark one might suppose them the same fruit. Among these specimens we find one larger than the others, which Mr. Allen says was produced from a graft on an apple tree, set two years ago. It is high flavored and more mature than the others. We may add that this is one of the best for pyramids on quince stock. Mr. A. has promised us a fuller account of this fruit than has yet appeared.

Comparative profits of cultivating Fall and Winter Pears. (P. P. Lyon, Plymouth, Mich.) We have not time this month to give this subject attention, but will as soon as possible.

Rochester Commercial Nursery,

No. 3 EAST AVENUE, ROCHESTER, N. YORK.

THE Subscribers respectfully inform the public that their stock of FRUIT TREES for sale this Autumn is very large, and comprises all the varieties that are really desirable. They leave to others the task of cultivating and selling worthless varieties, and intend to propagate none but such as have been well tested and approved.

To those who wish to buy to sell again, we can offer great inducements.

☞ Priced Catalogues furnished to post-paid applicants.

Sept. 1, 1849. [9-4m] BISSELL & HOOKER.

SEEDLINGS, for Sale at the Geneva Nursery.

PEAR, Plum, Cherry, Apple Quince, Mountain Ash, Horse Chesnut, Buckthorn, &c. SEEDLINGS and SEED of the above trees for sale at the Geneva Nursery.

Also, all kinds of Fruit and Ornamental Trees, Shrubbery, and Vines for sale.

Geneva, Ont. Co., N. Y. [10 3m*] W. G. VERPLANCK.

Drain Tile, Pipes, and Roofing Tile.

BENJ. F. WHARTENBY, Manufacturer of DRAINING TILE, Drain Pipe, Roofing Tile, &c., offers them for sale at his kiln at Waterloo, Seneca Co., N. Y., at the following prices. 4 inch horse-shoe Tile, $15 per 1000—3 inch, $12 50—2 inch, $10. 4 inch Pipes, $16—3 inch, $14—2 inch, $10—1½ inch, $9—1 inch, $8. Roofing Tile, $20—13½ tile to the rod. Soles for the horse-shoe tile, half the price of tile; these are not always necessary.

All orders promptly supplied. [11-2t]

Waterloo, N. Y., Nov. 1, 1849 B. F. WHARTENBY.

Back numbers and volumes of the Farmer promptly supplied to agents and new subscribers.

PROSPECTUS OF

Moore's Rural New-Yorker,

A WEEKLY JOURNAL, IN QUARTO FORM,

Devoted to Agriculture, Horticulture, Mechanic Arts, Science, Literature, Education, Rural and Domestic Economy, Reports of the Crops & Markets, and General Intelligence-Independent on all Subjects.—Each number Illustrated with Beautiful and Costly Engravings.

CONDUUCTED BY D. D. T. MOORE.

ASSOCIATE AND CORRESPONDING EDITORS:

LYMAN B. LANGWORTHY, Esq., of Monroe County,
T. C. PETERS, (Editor Wool Grower,) of Genesee Co.,
E. COMSTOCK, (former Ed. Central New York Farmer,) of Oneida County.

Horticultural Department by JAMES VICK, JR.
Educational Department by L. WETHERELL, A. M.

IN ANNOUNCING A NEW PERIODICAL, bearing the above title, and asking therefor the support and influence of the Rural Population of the Country, the Publisher solicits attention to its plan and the objects contemplated. It may be proper to remark, in the first place, that the enterprise has not been hastily determined upon. On the contrary, we have long had it in view, and consulted with many of the most intelligent and influential farmers in the State, who have almost invariably admitted the necessity and importance of the work, and urged its commencement. We have likewise received numerous letters during the past two years, suggesting and advising the publication of such a journal as the one now offered to the Agricultural Community. Indeed, from the facts mentioned, and other reliable information upon the subject, we believe that the Industrial Citizens of the Empire State WANT and will SUSTAIN a *Weekly Agricultural and Family Newspaper*—and that such a work, properly projected and conducted, will prove largely beneficial to the Productive Interests of the Country. These are some of the reasons which have induced us to embark in the enterprise—a few of the *facts* upon which we base our *faith* in its success.

THE RURAL NEW-YORKER, as its title indicates, will be principally devoted to *Agriculture* and *Horticulture* and their kindred Arts and Sciences. The Conductor has secured such assistance in the **Editorial Department**, as will, it is confidently believed, render the work one of the most reliable and valuable in the country. A large number of Contributors and Correspondents—men who possess, and know how to impart, both practical and scientific knowledge—will communicate the results of their experience, observation and study to the readers of the New Yorker. Every branch of Farm, Fruit and Garden Culture will be fully and seasonably discussed. Each number of the paper will be *appropriately illustrated*. In this respect we pledge ourselves to make the New Yorker *far superior* to any similar journal ever issued in the Union. The volume for 1850 will contain

OVER 150 HANDSOME AND COSTLY ENGRAVINGS,

embracing Designs of Farm Buildings,—Portraits of Domestic Animals.—Figures of New and Improved Implements and Machines.—Choice Fruits and Fruit and Ornamental Trees, Shrubs, Flowers, &c., &c. Particular attention will be given to Rural Architecture; such articles, designs and plans will be published as must lead to a more correct taste, and the erection of more convenient and beautiful Farm Buildings and Suburban Residences. The Proceedings of our State and County Agricultural Societies will be noticed promptly, or published at length—together with such other similar information as will prove interesting to all engaged in rural pursuits or in promoting improvement.

To Mechanics, Manufactures and Inventors, the Rural New Yorker will furnish useful and interesting intelligence. It will contain figures and descriptions of improved machines and implements—give a list of Patents as issued—notice all new and valuable discoveries in the Mechanic Arts—and embrace a variety of other information calculated to enhance the interests of all engaged in mechanical employments.

The Departments devoted to **Literature, Education** and **Domestic Economy** will be conducted with great care, and an earnest desire to render their contents pleasing, useful and acceptable at the *Family Fireside*. Avoiding the trashy nonsense put forth in too many of the literary periodicals of the day, we shall aim to give, each week, such mental entertainment as will tend to improve and interest the *heart* and *mind*, without vitiating the taste or corrupting the morals of any who may partake of our banquet. Indeed, we shall strive to furnish such a variety of choice reading as will prove interesting to the aged and the youthful—the fathers and mothers, young men and maidens.

That portion of the paper devoted to **General Intelligence** will contain a summary of the latest and most imsortant Domes- and Foreign News. No effort will be spared to make this department equal to the best weekly newspapers of the day. Particular and careful attention will be given to reports of the Markets, Crops, &c. The columns devoted to this subject can be made highly interesting and really valuable to every farmer. It is a matter of great importance that every producer should have late and reliable intelligence concerning the crops and markets, and we shall endeavor to keep our readers posted up on these topics. The Telegraph, and an exchange with the best American and European commercial journals, will enable us to give, in each number the most recent and accurate information.

IN TYPOGRAPHICAL APPEARANCE and mechanical execution the New Yorker will be second to no similar journal of its class. It will be published in Quarto Form, on *new, handsome* and *clear type*, and paper of superior quality. The size will be larger than either of the weekly agricultural journals, (of which there are five or six) in this country: each number containing EIGAT LARGE QUARTO PAGES, (of five columns each,) with Index, &c., at the close of the volume—thus rendering the work convenient and suitable for preservation and binding. It will be published *every Thursday*, and mailed so as to reach all its subscribers on the principal mail routs in this State on or before the day of publication. The first number will be issued on or before the first of January—the volume commencing with the year.

Terms, in Advance: *Single copy Two Dollars a Year. To Clubs and Agents as follows:—Four Copies for* $7—*Seven Copies for* $12—*Ten Copies for* $15. *All moneys received by mail will be acknowledged in the paper, and receipts sent whenever desired.*

In conclusion we confidently appeal to the Agricultural Community, to the promotion of whose interests the paper will be mainly devoted, for support and encouragement. We shall aim to make the New Yorker every way worthy of an extensive circulation throughout the Northern and Western States—and such, we fully believe, it will ere long receive. But as our expenses must be heavy, we trust all who want a *first class family paper*, will at once give us their aid and influence. Many have already subscribed, and promised to assist in establishing the New Yorker upon a permanent basis; and we ask all into whose hands this Prospectus may fall to do likewise. Those who do not wish to pay until they see the paper, can send on their names, and forward the subscription or hand it to an agent on the reception of the first number. Any and every assistance which may be rendered to forward the enterprise will be duly appreciated and gratefully acknowledged.

Those who know how faithfully we have fulfilled our pledges as conductor of the Genesee Farmer, during the past four years—in which period its circulation has been increased from *three* to *over twenty thousand*—will not perhaps require additional evidence that the promises made in this Prospectus will be fully redeemed.

☞ Post-Masters, Clergymen, Teachers, Officers and Members of Agricultural Societies, and other influential persons, of all professions—friends of mental and moral as well as of agricultural improvement—are respectfully solicited to obtain subscriptions to the New Yorker, and forward the same as early as convenient. Subscription money, properly enclosed, may be sent by mail at our risk. Address to

D. D. T. MOORE, ROCHESTER, N. Y.

DECEMBER, 1849.

Agents Wanted—To Young Men.

LOCAL and Traveling Agents wanted for *Moore's Rural New-Yorker*, and sell bound copies of the *Genesee Farmer*, (embracing all the volumes from 1845 to 1849, inclusive.) Active and responsible young men can do well in the business. In all cases where certificates of agency are given, satisfactory recommendations as to integrity and responsibility will be required. Local agents will not need certificates, as they will only act among their friends and acquaintances.

To all properly qualified, who wish to engage in the business, a very liberal commission will be allowed. For particulars address (post paid.) or apply personally to D. D. T. MOORE.
Dec. 1, 1849. Rochester, N. Y.

Notice to Agents, Advertisers, &c.

IN consequence of the change in the proprietorship of the Farmer, it becomes necessary that all outstanding accounts should be settled at as early a day as practicable. All moneys due the establishment, from Agents, Advertisers, and others, are payable to the undersigned. Those who receive bills, are requested to forward payment by mail or otherwise, as soon as convenient.

In all cases in which I have received payment for future volumes of the Farmer, or engaged to supply County Ag. Societies with bound copies of the present or past volumes, my contracts will be fulfilled. Agents who have been awarded, (and not already received) premiums for obtaining subscribers, will receive the same on application. D. D. T. MOORE.

Nursery Fruit Trees for Sale.

THE undersigned has from fifteen to twenty thousand cultivated Fruit Trees, fit for transplanting into orchards and gardens, for sale on liberal terms. There are over one hundred of the choicest varieties of Apple, Pear, Peach, Cherry and Plum Trees, in his collection, that can be found in this country. All orders from a distance will receive prompt attention.

MOSES LONG, No. 29, Alexander street.
Rochester, N. Y., Oct. 1. [10-2m]

A New Book for Every Farmer!

SCIENTIFIC AGRICULTURE, or the Elements of Chemistry, Geology, Botany, and Meteorology, applied to practical Agriculture: by M. M. Rodgers, M. D., with the approval and assistance of several practical and scientific gentlemen. The work is illustrated by a large number of engravings, and is published in a neat style, well bound, and sold cheap.

NOTICES OF THE WORK.

"The general correctness, brevity, clearness, and multitude of its principles applicable to practical agriculture, that first and best of arts, commend the work to the youth of our land, as well as to its older and younger agriculturists."—*Prof. Chester Dewey, Principal Rochester Collegiate Institute.*

"This is an interesting and much needed volume, well adapted to the wants and taste of that intelligent portion of the community for whom it is more particularly adapted—making combined a complete system of agriculture, easily understood and readily defined."—*N. Y. Farmer and Mechanic.*

"It appears to be exceedingly well adapted for the purpose of instruction. It is concise and plain—neither too much nor too little"—*Hon. Zadock Pratt.*

"We have seen enough to convince us that it is a work of rare merit, such an one as will meet with the approbation of all intelligent readers. Every agriculturist who reads and digests should procure the work."—*American Farmer, Baltimore.*

"We commend the work to the Farmer, especially to the young farmer, as well worthy of his attention."—*Berkshire Culturist, Pittsfield, Mass.*

"We think the author has ably preformed the difficult task of rendering science easy to the practical farmer."—*New England Farmer, by S. W. Cole.*

ERASTUS DARROW, Publisher and Bookseller,
Corner Main and St. Paul-streets, Rochester.

☞ For sale by the Publisher; also, at the office of the Genesee Farmer, and by Booksellers generally.

*** Darrow has a large stock of BOOKS at wholesale or retail, Orders promptly answered. [3-eom-tf]

Owen Morris,

CITY BINDERY, UNDER THE MUSEUM, Rochester, N. Y. THREE Silver Medals have been awarded to the subscriber for the best specimens of Book Binding, exhibited at the Mechanics' Fairs held in this city and Buffalo.

Gentlemen's Libraries fitted up and repaired; Music paper ruled. Music and Periodicals bound and finished to any pattern; Blank Account Books executed at this establishment, have given unequalled satisfaction, by their durability and elegance. Strict attention is always paid to the quality of paper used, to render them equal to the best in the United States, or those imported.

Ladies' Scrap and Guard Books, Albums and Portfolios, in all their varieties, manufactured to order in the best style.

Banks, Institutions, Societies, &c., may be assured of work being done on the most advantageous terms.

Gentlemen residing at a distance, by packing and forwarding volumes to the above directions, stating price and style, may rely upon their being well bound on the most favorable terms, also carefully and punctually returned.

N. B.—The proprietor has spared no expense in fitting up the establisment, and introducing into Western New York the latest improvement in Book Binding.

☞ The Genesee Farmer and other periodicals bound to order.

OWEN MORRIS.
City Bindery, under the Museum.
Rochester Nov. 1, 1849 [11-tf]

Patent Improved Railroad Horse-Power and Overshot Thresher and Separator.

THIS Power & Thresher, which has been so long before the public, and given such perfect and universal satisfaction, has met with such a constant and rapidly increasing sale, that other manufacturers sometimes adopt headings similar to those of my advertisement—and, in some cases, parts of the advertisements themselves—which, if not observed, may lead to mistakes and purchasers may get, instead of the machine which has earned the reputation, one of a different construction.

The machine has been much improved, and no pains or expense is spared to make it in the most thorough and durable manner, as we have the greatest facilities as to power, room and materials at our command. It is the cheapest, simplest, most durable and portable set of machinery for the purpose in use, and warranted in every case to give satisfaction to the purchaser. For further particulars see my advertisements in the agricultural papers of the United States and Canada. Catalogues and circulars furnished gratis on application by mail.

HORACE L. EMERY,
Agricultural Warehouse, 369 & 371, Broadway, Albany, N. Y.

Improved Well and Cistern Pumps.

DOWNS, MYNDHERSE & CO., of Seneca Falls, N. Y., would call the attention of Hardware Merchants and all others who have occasion to deal in or use suction pumps, to their *CAST IRON, REVOLVING SPOUT AND CISTERN PUMPS*, for which they have obtained Letters Patent of the United States. For particular description and figures of our Pump, see August number of the Genesee Farmer, page 181. [9-tf]

The Water-Cure Journal.

THE WATER-CURE JOURNAL AND HERALD OF REFORMS, is published monthly, at *One Dollar* a year, in advance, containing thirty-two large octavo pages, illustrated with engravings exhibiting the Structure and Anatomy of the entire Human Body; with familiar explanations, easily to be understood by all classes.

The Water-Cure Journal, emphatically a *Journal of Health*, embracing the true principles of *Life and Longevity*, has now been before the public several years. And they have expressed their approval of it by giving it a monthly circulation of upwards of Fifteen Thousand Copies. This Journal is edited by the leading Hydropathic practitioners, aided by numerous able contributors in various parts of our own and other countries.

FOWLERS & WELLS, publishers,
Clinton Hall, 129 and 131 Nassau-street, New-York.

The Phrenological Journal.

This Journal is a monthly publication, containing thirty-six or more octavo pages, at One Dollar a year, in advance.

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October 1, 1849. [10-tf]

Agricultural Books.—A large assortment of Books on Agriculture, Horticulture, &c., for sale at this Office.

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Premiums for 1850!

With a view to extend the circulation and increase the usefulness of the Genesee Farmer, the Proprietor offers the following liberal premiums to the friends of Rural Improvement, who may interest themselves in procuring Subscribers to the work:

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4th. Such books as the receiver thereof may designate, worth ten dollars, to the fourth highest in procuring subscribers at the club prices.

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Editor and Proprietor.

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We are indebted to some kind friend for a handsome pamphlet containing the Transactions of the New Haven Horticultural Society, and an Address delivered at its Annual Fair, on the 29th of September last, by S. B. Parsons, Esq., of Long Island. The address is excellent, and we shall next month give some extracts that will be interesting to all.

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VOLUME XI, FOR 1850.

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DANIEL LEE.
November, 1849. *Rochester, New York.*

THE GENESEE FARMER,

Published on the first of each month, at Rochester, N. Y., by

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DANIEL LEE & D. D. T. MOORE, Editors.

P. BARRY, Conductor of Horticultural Department.

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☞ Advertisements, notices, &c. should be forwarded on or before the 15th of the preceding month, to secure insertion in any specified number.

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